## City of Leon, Iowa

Sanitary Sewer Improvements Cost Estimate - Sanitary Sewer Rehabilitation

## **CAPITAL COSTS**

**Project: Sanitary Sewer Rehabilitation** 

Item No. Description   Quantity   Units   Unit Price   Total Price	Project: Sanitary Sewer Rehabilitation				
1 Mobilization, Insurance, etc 1 LS \$55,000 \$55,000 2 Traffic Control 1 LS \$15,000 \$15,000 3 Clearing and Grubbing 1 LS \$15,000 \$15,000 4 Erosion Control Plan, Permit and Management 1 LS \$15,000 \$15,000 4 Erosion Control Plan, Permit and Management 1 LS \$10,000 \$10,000 \$10,000 \$20,	Item No. Description	Quantity	Units	Unit Price	Total Price
2 Traffic Control 3 Clearing and Grubbing 4 Erosion Control Plan, Permit and Management 1 LS \$15,000 \$15,000 4 Erosion Control Plan, Permit and Management 1 LS \$10,000  SANITARY SEWER REHABILITATION 5 CIPP Sanitary Sewer Lining, 6-inch 5 CIPP Sanitary Sewer Lining, 6-inch 6 CIPP Sanitary Sewer Lining, 10-inch 7,204 6 CIPP Sanitary Sewer Lining, 10-inch 8 8-inch Sanitary Sewer Point Repair 7 CIPP Sanitary Sewer Point Repair 8 8-inch Sanitary Sewer Point Repair 9 10-inch Sanitary Sewer Point Repair 10 Manhole Rehabilitation 10 Manhole Rehabilitation 10 Manhole Rehabilitation 11 8" PVC Sanitary Sewer (New Pipe) 11 8" PVC Sanitary Sewer (New Pipe) 11 8" PVC Sanitary Sewer Pipe Insulation 12 Sanitary Sewer Pipe Insulation 13 4" ID Sanitary Manhole 14 Imported Granular Backfill 14 LIP \$30 17 6" PCC Driveway Paving 19 Sey 17 6" PCC Driveway Paving 19 Remove 6" PCC Paving 19 Remove 6" PCC Paving 290 SY 290	GENERAL				
3 Clearing and Grubbing 4 Erosion Control Plan, Permit and Management 1 LS \$15,000 \$15,000 8 Erosion Control Plan, Permit and Management 1 LS \$10,000 8 Erosion Control Plan, Permit and Management 1 LS \$10,000 8 SANITARY SEWER REHABILITATION 5 CIPP Sanitary Sewer Lining, 6-inch 5 CIPP Sanitary Sewer Lining, 8-inch 7,204 LF \$30 \$216,120 7 CIPP Sanitary Sewer Lining, 10-inch 8 B-inch Sanitary Sewer Point Repair 12 EA \$5,000 \$60,000 9 10-inch Sanitary Sewer Point Repair 3 EA \$5,000 \$15,000 10 Manhole Rehabilitation 27 EA \$3,500 \$94,500  SANITARY SEWER REPLACEMENT FIRST STREET 11 8" PVC Sanitary Sewer (New Pipe) 1,320 LF \$55 \$72,600 12 Sanitary Sewer Pipe Insulation 85 LF \$2,50 \$213 13 4" ID Sanitary Manhole 10 EA \$5,000 \$50,000 14 Imported Granular Backfill 424 LF \$30 \$12,720 15 Full Depth Saw Cut 16 4" PCC Sidewalk 180 SF \$5.00 \$900 17 6" PCC Driveway Paving 290 SY \$50.00 18 Remove 6" PCC Paving 290 SY \$50.00 20 4" Sanitary Sewer Learral 40 LF \$10 \$400 21 4" Sanitary Sewer Learral 40 LF \$10 \$400 21 4" Sanitary Sewer Learral 50ed 22 Abandon Existing Sanitary Sewer 1 LS \$10,000 \$11,000 23 Pressure Main offset 24 "PVC Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 25 4" ID Sanitary Sewer (New Pipe) 11 LS \$10,000 \$10,000 26 4" Sanitary Sewer (New Pipe) 11 LS \$5,000 \$5,000 26 4" Sanitary Sewer (New Pipe) 10 LF \$55 \$5,500 27,450 28 AND SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE 27 10" PVC Sanitary Sewer (New Pipe) 11 LS \$10,000 \$10,000 29 Grading 1 LS \$10,000 \$10,000  FLUSH TANK REHABILITATION 30 Flush Tank Rehabilitation 5 EA \$3,500 \$17,500	1 Mobilization, Insurance, etc	1	LS	\$55,000	\$55,000
A Erosion Control Plan, Permit and Management   1	2 Traffic Control	1	LS	\$15,000	\$15,000
A Erosion Control Plan, Permit and Management   1	3 Clearing and Grubbing	1	LS	\$15,000	\$15,000
5 CIPP Sanitary Sewer Lining, 6-inch         2,323         LF         \$40         \$92,920           6 CIPP Sanitary Sewer Lining, 8-inch         7,204         LF         \$30         \$216,120           7 CIPP Sanitary Sewer Lining, 10-inch         4,956         LF         \$35         \$173,460           8 8-inch Sanitary Sewer Point Repair         12         EA         \$5,000         \$60,000           9 10-inch Sanitary Sewer Point Repair         3         EA         \$5,000         \$15,000           10 Manhole Rehabilitation         27         EA         \$3,500         \$94,500           SANITARY SEWER REPLACEMENT FIRST STREET         ***         ***         ***         \$55         \$72,600           12 Sanitary Sewer Pipe Insulation         85         LF         \$2.50         \$213         13         4' ID Sanitary Manhole         10         EA         \$5,000         \$50,000         \$50,000         14         Imported Granular Backfill         424         LF         \$30         \$12,720         \$5         \$11,000         \$5,400         \$5,000         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,500         \$900         \$7         \$5					
5 CIPP Sanitary Sewer Lining, 6-inch         2,323         LF         \$40         \$92,920           6 CIPP Sanitary Sewer Lining, 8-inch         7,204         LF         \$30         \$216,120           7 CIPP Sanitary Sewer Lining, 10-inch         4,956         LF         \$35         \$173,460           8 8-inch Sanitary Sewer Point Repair         12         EA         \$5,000         \$60,000           9 10-inch Sanitary Sewer Point Repair         3         EA         \$5,000         \$15,000           10 Manhole Rehabilitation         27         EA         \$3,500         \$94,500           SANITARY SEWER REPLACEMENT FIRST STREET         ***         ***         ***         \$55         \$72,600           12 Sanitary Sewer Pipe Insulation         85         LF         \$2.50         \$213         13         4' ID Sanitary Manhole         10         EA         \$5,000         \$50,000         \$50,000         14         Imported Granular Backfill         424         LF         \$30         \$12,720         \$5         \$11,000         \$5,400         \$5,000         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,400         \$6,500         \$900         \$7         \$5					
6 CIPP Sanitary Sewer Lining, 8-inch 7,204 LF \$30 \$216,120 7 CIPP Sanitary Sewer Lining, 10-inch 4,956 LF \$35 \$173,460 8 8-inch Sanitary Sewer Point Repair 12 EA \$5,000 \$60,000 9 10-inch Sanitary Sewer Point Repair 3 EA \$5,000 \$15,000 10 Manhole Rehabilitation 27 EA \$3,500 \$94,500 \$15,000 10 Manhole Rehabilitation 27 EA \$3,500 \$94,500 \$20,000 10 Manhole Rehabilitation 27 EA \$3,500 \$94,500 \$20,000 12 Sanitary Sewer (New Pipe) 1,320 LF \$55 \$72,600 12 Sanitary Sewer (New Pipe) 10 EA \$5,000 \$50,000 12 Sanitary Sewer (New Pipe) 10 EA \$5,000 \$50,000 14 Imported Granular Backfill 424 LF \$30 \$12,720 15 Full Depth Saw Cut 540 LF \$10,000 \$5,400 16 4" PCC Sidewalk 180 SF \$5.00 \$900 17 6" PCC Driveway Paving 290 SY \$50 \$14,500 18 Remove 6" PCC Paving 290 SY \$9,000 \$2,610 19 Remove 12" PCC Paving 30 SY \$9,000 \$2,610 19 Remove 12" PCC Paving 30 SY \$20 \$600 20 4" Sanitary Service Lateral 40 LF \$10 \$30 \$11,700 22 Abandon Existing Sanitary Sewer 1 LS \$10,000 \$10,000 \$3,000 \$3 Pressure Main offset 2 EA \$5,000 \$10,000 \$3,000 \$4" Depth Saw Cut 1 LS \$10,000 \$10,000 \$3 Pressure Main offset 2 EA \$5,000 \$10,000 \$4" Depth Saw Cut 2 Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5000 26 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$5,000 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$600 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 \$600 \$6 4" Sanitary Sewer (New Pipe) 100 LF \$65 \$65 \$73,450 \$600 \$600 \$600 \$600 \$600 \$600 \$600 \$6					
7 CIPP Sanitary Sewer Lining, 10-inch         4,956         LF         \$35         \$173,460           8 8-inch Sanitary Sewer Point Repair         12         EA         \$5,000         \$60,000           9 10-inch Sanitary Sewer Point Repair         3         EA         \$5,000         \$15,000           10 Manhole Rehabilitation         27         EA         \$3,500         \$94,500           SANITARY SEWER REPLACEMENT FIRST STREET           11 8" PVC Sanitary Sewer (New Pipe)         1,320         LF         \$55         \$72,600           12 Sanitary Sewer Pipe Insulation         85         LF         \$2,50         \$213           13 4" ID Sanitary Manhole         10         EA         \$5,000         \$50,000           14 Imported Granular Backfill         424         LF         \$30         \$12,720           15 Full Depth Saw Cut         540         LF         \$10.00         \$5,400           16 4" PCC Sidewalk         180         SF         \$5.00         \$900           17 6" PCC Driveway Paving         290         SY         \$50         \$14,500           18 Remove 6" PCC Paving         290         SY         \$90         \$2,610           19 Remove 12" PCC Paving         30         SY         \$20	5 CIPP Sanitary Sewer Lining, 6-inch	2,323	LF		\$92,920
8 8-inch Sanitary Sewer Point Repair       12 EA       \$5,000       \$60,000         9 10-inch Sanitary Sewer Point Repair       3 EA       \$5,000       \$15,000         10 Manhole Rehabilitation       27 EA       \$3,500       \$94,500         SANITARY SEWER REPLACEMENT FIRST STREET       ***       ***       ***         11 8" PVC Sanitary Sewer (New Pipe)       1,320 LF       \$55       \$72,600         12 Sanitary Sewer Pipe Insulation       85 LF       \$2.50       \$213         13 4" ID Sanitary Manhole       10 EA       \$5,000       \$50,000         14 Imported Granular Backfill       424 LF       \$30       \$12,720         15 Full Depth Saw Cut       540 LF       \$10.00       \$5,400         16 4" PCC Sidewalk       180 SF       \$5.00       \$900         17 6" PCC Driveway Paving       290 SY       \$50       \$14,500         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Service Lateral       30 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer (New Pipe)       10 LF       \$5,000       \$5,	6 CIPP Sanitary Sewer Lining, 8-inch	7,204	LF	\$30	\$216,120
9 10-inch Sanitary Sewer Point Repair 10 Manhole Rehabilitation 27 EA \$3,500 \$15,000 10 Manhole Rehabilitation 28 EA \$3,500 \$94,500  SANITARY SEWER REPLACEMENT FIRST STREET 11 8" PVC Sanitary Sewer (New Pipe) 1,320 LF \$55 \$72,600 12 Sanitary Sewer Pipe Insulation 85 LF \$2.50 \$213 13 4" ID Sanitary Manhole 10 EA \$5,000 \$50,000 14 Imported Granular Backfill 424 LF \$30 \$12,720 15 Full Depth Saw Cut 540 LF \$10.00 \$5,400 16 4" PCC Sidewalk 180 SF \$5.00 \$900 17 6" PCC Driveway Paving 290 SY \$50 \$14,500 18 Remove 6" PCC Paving 30 SY \$9.00 \$2,610 19 Remove 12" PCC Paving 30 SY \$20 \$600 20 4" Sanitary Sewer Lateral Bored 390 LF \$10 \$400 21 4" Sanitary Sewer Lateral Bored 390 LF \$10 \$400 21 4" Sanitary Sewer Lateral Bored 390 LF \$30 \$11,700 22 Abandon Existing Sanitary Sewer 1 LS \$10,000 \$10,000 SANITARY SEWER INSTALLATION SIXTH STREET 24 8" PVC Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 25 4" ID Sanitary Manhole 1 EA \$5,000 \$5,000 26 4" Sanitary Sewer (New Pipe) 100 LF \$55 \$5,500 SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE 27 10" PVC Sanitary Sewer (New Pipe) 1,130 LF \$65 \$73,450 28 New Sanitary Manhole 4 EA \$5,000 \$20,000 29 Grading 5 EA \$3,500 \$17,500	7 CIPP Sanitary Sewer Lining, 10-inch	4,956	LF	\$35	\$173,460
SANITARY SEWER REPLACEMENT FIRST STREET	8 8-inch Sanitary Sewer Point Repair	12	EA	\$5,000	\$60,000
SANITARY SEWER REPLACEMENT FIRST STREET	9 10-inch Sanitary Sewer Point Repair	3	EA	\$5,000	\$15,000
11 8" PVC Sanitary Sewer (New Pipe)       1,320 LF       \$55       \$72,600         12 Sanitary Sewer Pipe Insulation       85 LF       \$2.50       \$213         13 4" ID Sanitary Manhole       10 EA       \$5,000       \$50,000         14 Imported Granular Backfill       424 LF       \$30       \$12,720         15 Full Depth Saw Cut       540 LF       \$10.00       \$5,400         16 4" PCC Sidewalk       180 SF       \$5.00       \$900         17 6" PCC Driveway Paving       290 SY       \$50       \$14,500         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sever Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       2 EA       \$5,000       \$5,000         25 4" ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450		27	EA		
11 8" PVC Sanitary Sewer (New Pipe)       1,320 LF       \$55       \$72,600         12 Sanitary Sewer Pipe Insulation       85 LF       \$2.50       \$213         13 4" ID Sanitary Manhole       10 EA       \$5,000       \$50,000         14 Imported Granular Backfill       424 LF       \$30       \$12,720         15 Full Depth Saw Cut       540 LF       \$10.00       \$5,400         16 4" PCC Sidewalk       180 SF       \$5.00       \$900         17 6" PCC Driveway Paving       290 SY       \$50       \$14,500         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$90       \$2600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sever Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       2 EA       \$5,000       \$5,000         25 4" ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450 <td></td> <td></td> <td></td> <td></td> <td></td>					
12 Sanitary Sewer Pipe Insulation       85 LF       \$2.50       \$213         13 4' ID Sanitary Manhole       10 EA       \$5,000       \$50,000         14 Imported Granular Backfill       424 LF       \$30       \$12,720         15 Full Depth Saw Cut       540 LF       \$10.00       \$5,400         16 4" PCC Sidewalk       180 SF       \$5.00       \$900         17 6" PCC Driveway Paving       290 SY       \$5.00       \$900         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       2 EA       \$5,000       \$5,000         25 4" ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Sever (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000					
13 4' ID Sanitary Manhole       10 EA       \$5,000       \$50,000         14 Imported Granular Backfill       424 LF       \$30       \$12,720         15 Full Depth Saw Cut       540 LF       \$10.00       \$5,400         16 4" PCC Sidewalk       180 SF       \$5.00       \$900         17 6" PCC Driveway Paving       290 SY       \$50       \$14,500         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       2 EA       \$5,000       \$5,000         25 4' ID Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanita	• • • • •	1,320	LF	\$55	
14 Imported Granular Backfill       424 LF       \$30       \$12,720         15 Full Depth Saw Cut       540 LF       \$10.00       \$5,400         16 4" PCC Sidewalk       180 SF       \$5.00       \$900         17 6" PCC Driveway Paving       290 SY       \$50       \$14,500         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4" ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Re	12 Sanitary Sewer Pipe Insulation	85	LF	\$2.50	\$213
15 Full Depth Saw Cut       540 LF       \$10.00       \$5,400         16 4" PCC Sidewalk       180 SF       \$5.00       \$900         17 6" PCC Driveway Paving       290 SY       \$50       \$14,500         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Sevrice Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$20         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000	13 4' ID Sanitary Manhole	10	EA	\$5,000	\$50,000
16 4" PCC Sidewalk       180 SF       \$5.00       \$900         17 6" PCC Driveway Paving       290 SY       \$50       \$14,500         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       2 EA       \$5,000       \$5,000         25 4' ID Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILI	14 Imported Granular Backfill	424	LF	\$30	\$12,720
17 6" PCC Driveway Paving       290 SY       \$50       \$14,500         18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE       27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA	15 Full Depth Saw Cut	540	LF	\$10.00	\$5,400
18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE       27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500	16 4" PCC Sidewalk	180	SF	\$5.00	\$900
18 Remove 6" PCC Paving       290 SY       \$9.00       \$2,610         19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE       27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500	17 6" PCC Driveway Paving	290	SY	\$50	\$14,500
19 Remove 12" PCC Paving       30 SY       \$20       \$600         20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE       27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500	· · · · · · · · · · · · · · · · · · ·	290	SY	\$9.00	\$2,610
20 4" Sanitary Service Lateral       40 LF       \$10       \$400         21 4" Sanitary Sewer Lateral Bored       390 LF       \$30       \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET         24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE		30	SY		
21 4" Sanitary Sewer Lateral Bored       390 LF       \$30 \$11,700         22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET         24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE					
22 Abandon Existing Sanitary Sewer       1 LS       \$10,000       \$10,000         23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE	· · · · · · · · · · · · · · · · · · ·				
23 Pressure Main offset       2 EA       \$5,000       \$10,000         SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE	· · · · · · · · · · · · · · · · · · ·				
SANITARY SEWER INSTALLATION SIXTH STREET       24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE					
24 8" PVC Sanitary Sewer (New Pipe)       100 LF       \$55       \$5,500         25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE				,	. ,
25 4' ID Sanitary Manhole       1 EA       \$5,000       \$5,000         26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE	SANITARY SEWER INSTALLATION SIXTH STREET				
26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE	24 8" PVC Sanitary Sewer (New Pipe)	100	LF	\$55	\$5,500
26 4" Sanitary Service Lateral       20 LF       \$10       \$200         SANITARY SEWER REPLACEMENT ALONG EAST TRUNK LINE         27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE	25 4' ID Sanitary Manhole	1	EA	\$5,000	\$5,000
27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE	· ·	20	LF	\$10	\$200
27 10" PVC Sanitary Sewer (New Pipe)       1,130 LF       \$65       \$73,450         28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE					
28 New Sanitary Manhole       4 EA       \$5,000       \$20,000         29 Grading       1 LS       \$10,000       \$10,000         FLUSH TANK REHABILITATION         30 Flush Tank Rehabilitation       5 EA       \$3,500       \$17,500         NEW SANITARY MANHOLE					
29 Grading 1 LS \$10,000 \$10,000  FLUSH TANK REHABILITATION 30 Flush Tank Rehabilitation 5 EA \$3,500 \$17,500  NEW SANITARY MANHOLE	27 10" PVC Sanitary Sewer (New Pipe)	1,130	LF		\$73,450
FLUSH TANK REHABILITATION 30 Flush Tank Rehabilitation 5 EA \$3,500 \$17,500  NEW SANITARY MANHOLE	28 New Sanitary Manhole	4	EA	\$5,000	\$20,000
30 Flush Tank Rehabilitation 5 EA \$3,500 \$17,500 NEW SANITARY MANHOLE	29 Grading	1	LS	\$10,000	\$10,000
30 Flush Tank Rehabilitation 5 EA \$3,500 \$17,500 NEW SANITARY MANHOLE	ELLISH TANK BEHARILITATION				
NEW SANITARY MANHOLE		_	EΔ	ቂያ ደበበ	¢17 500
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	NEW SANITARY MANHOLE				
	31 4' ID Sanitary Manhole	6	EA	\$5,500	\$33,000

SUBTOTAL - CONSTRUCTION	\$1,103,293
Contingency, Engineering, Legal	\$400,000
TOTAL PROJECT COST ESTIMATE	\$1 503 203

## ANNUAL OPERATIONS AND MAINTENANCE COSTS

**Project: Sanitary Sewer Rehabilitation** 

Item No. Description	Quantity Ur	nits Unit Price	Annual Cost
1 Labor Hours	6 Hr / v	vk \$20	\$6,240
2 Supplies	1	\$1,000	\$1,000
3 Maintenance and Repair	1	\$5,000	\$5,000
4 Insurance	1	\$2,000	\$2,000
TOTAL ANNUAL O&M COSTS			\$14,240